

CLAIMS

1. A method for screening a remedy for breast cancer comprising steps of: culturing a cell which expresses an estrone-3-sulfate transporter on its surface; measuring uptake of estrone-3-sulfate into the cultured cell in the presence of a test substance; and measuring/evaluating a level of inhibition of uptake activity of estrone-3-sulfate into the cell by the test substance.
2. The method for screening a remedy for breast cancer according to claim 1, wherein a level of inhibition of transporter activity is measured/evaluated by measuring/evaluating a concentration of estrone-3-sulfate in a cell.
3. The method for screening a remedy for breast cancer according to claim 1, wherein a level of inhibition of transporter activity is measured/evaluated by measuring/evaluating a level of cell proliferation.
4. A method for screening a remedy for breast cancer comprising steps of: bringing estrone-3-sulfate and a test substance into contact with a cell membrane fraction isolated from a cell which expresses an estrone-3-sulfate transporter on its surface; and measuring/evaluating a level of inhibition of specific binding of estrone-3-sulfate to the cell membrane fraction by the test substance.
5. A method for screening a remedy for breast cancer comprising steps of: isolating a cell membrane fraction from a cell which

expresses an estrone-3-sulfate transporter on its surface;
constructing an isolated cell membrane vesicle by making a
vesicle from the cell membrane fraction; bringing
estrone-3-sulfate and a test substance into contact with the
5 isolated cell membrane vesicle; and measuring/evaluating uptake
or a level of uptake inhibition of estrone-3-sulfate into the
vesicle by the test substance.

6. The method for screening a remedy for breast cancer according
10 to any one of claims 1 to 5, wherein the cell which expresses
an estrone-3-sulfate transporter on its surface is a cultured
human breast cancer cell line.

7. The method for screening a remedy for breast cancer according
15 to claim 6, wherein the cultured human breast cancer cell line
is an MCF-7 cell line, a T-47D cell line or a cell line derived
therefrom.

8. The method for screening a remedy for breast cancer according
20 to any one of claims 1 to 7, wherein a bulky anion compound which
is an organic anion transporter inhibitor is used as a test
substance.

9. The method for screening a remedy for breast cancer according
25 to claim 8, wherein the bulky anion compound which is an organic
anion transporter inhibitor is bromosulfophthalein,
dehydroepiandrosterone sulfate, dehydroepiandrosterone,
estradiol, taurocholic acid, benzbromarone, DIDS, probenecid,
sulfinpyrazone, bilirubin, statin HMGCoA reductase inhibitor,
30 quinidine, quinine, digoxin, bile acids, thyroid hormone (T3,

T4), or a synthetic oligopeptide.

10. The method for screening a remedy for breast cancer according to any one of claims 1 to 7, wherein a neutralizing antibody
5 to an estrone-3-sulfate transporter is used as a test substance.

11. The method for screening a remedy for breast cancer according to claim 10, wherein the neutralizing antibody to an estrone-3-sulfate transporter is a specific antibody to an SLC
10 transporter, OAT1, OAT2, OAT3, OAT4, OATP-A, OATP-B, OATP-C, OATP-D, OATP-E, OATP-F, OATP-8, NTCP, MRPs, or BCRP.

12. The method for screening a remedy for breast cancer according to any one of claims 1 to 11, wherein the estrone-3-sulfate
15 transporter is selected from an SLC transporter, OAT1, OAT2, OAT3, OAT4, OATP-A, OATP-B, OATP-C, OATP-D, OATP-E, OATP-F, OATP-8, NTCP, MRPs, and BCRP.

13. A remedy for breast cancer obtained by the method for screening
20 according to any one of claims 1 to 12.